

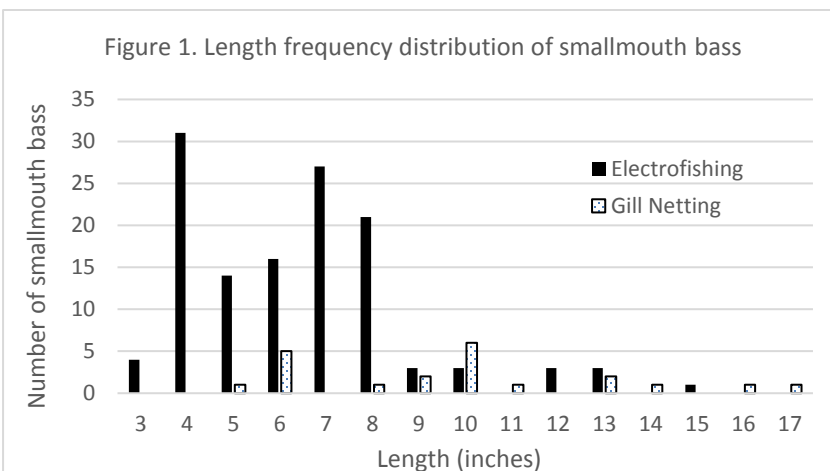
Canandaigua Lake Smallmouth Bass Survey (Survey #: 817013, 817027)

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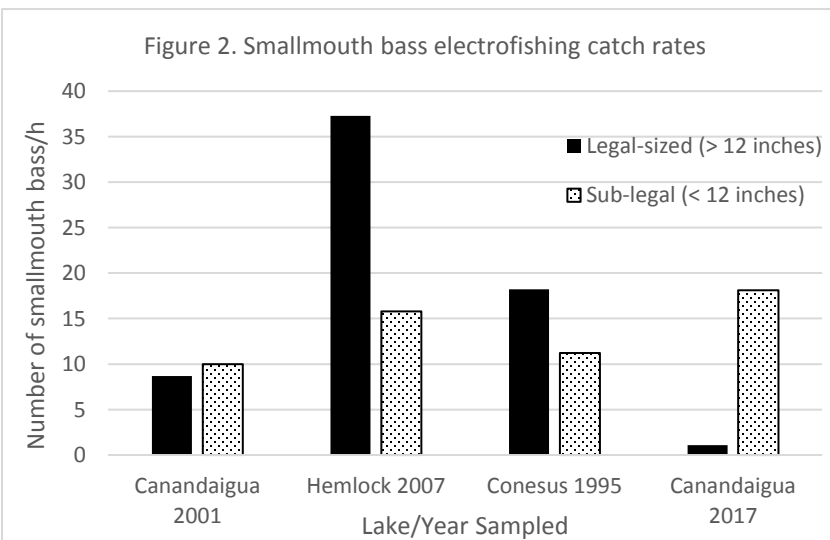
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Canandaigua Lake is a 10,558 acre lake in Ontario and Yates Counties with a maximum depth of 276 feet. Most of the lake has steep drop offs with narrow areas of shallow water along the shoreline. The north and south ends of the lake are relatively shallow and well vegetated. The primary access points for fishing Canandaigua Lake are the NYSDEC Woodville boat launch on the south end of the lake and the NYSOPRHP boat launch on the north end. In recent years anglers have expressed concerns about the status of the smallmouth bass population in Canandaigua Lake. Boat electrofishing and gill netting surveys were conducted in 2017 to check the status of warm water sportfish and panfish populations, with a focus on smallmouth bass. The electrofishing survey followed standard protocols from Green (1989).

A total of 395 fish from 18 different species were collected during June electrofishing (Table 1). There were 126 smallmouth bass collected ranging from 3 - 15 in (Figure 1). Ninety-four percent of those collected were below legal size (≥ 12 inches). The boat electrofishing catch rate of 1 legal-sized smallmouth bass/h is well below typical catch rates for large lakes in the region (Figure 2). Electrofishing results also indicated that yellow perch and rock bass are abundant throughout the lake and largemouth bass are abundant in the north and south ends of the lake.



Gill netting was conducted in August to sample deeper water and collect any size groups of smallmouth bass that might be missed with electrofishing. A total of 736 fish from 17 different species were collected during gill netting (Table 2). There were 21 smallmouth bass collected ranging from 5 - 17 in (Figure 1). Seventy-six percent of those collected were below legal size (≥ 12 inches). Gill netting also indicated that yellow perch and rock bass are very abundant throughout the lake.



Both electrofishing and gill netting results indicated that the adult smallmouth bass population is low in Canandaigua Lake while juvenile smallmouth bass are relatively abundant. The abundance of juvenile smallmouth bass should allow the adult population to recover over the next few years. The smallmouth bass population should be monitored in 4 to 5 years with spring electrofishing using standard Bureau of Fisheries methods (Brooking et al. 2018).



Table 1. Number collected and length category catch rates of sportfish and panfish from a boat electrofishing survey on Canandaigua Lake, 2017.

Species	Number collected	Time (h) ^a	All sizes	Length category ^b catch rate (fish/h)		
				Stock	Quality	Preferred
Chain pickerel	4	7.3	<1	<1	<1	<1
Smallmouth bass	126	7.3	17	8	1	<1
Largemouth bass	16	7.3	2	2	<1	<1
Black crappie	3	7.3	<1	<1	<1	<1
Rock bass	58	1.0	58	35	4	1
Pumpkinseed	50	1.0	50	49	44	2
Bluegill	20	1.0	20	15	4	1
Yellow perch	55	1.0	55	53	30	6

a – Not all species were targeted on all electrofishing runs.

b – Length categories for sportfish and panfish in Canandaigua Lake:

	Largemouth bass	Smallmouth bass	Chain pickerel	Black crappie/ Yellow perch	Bluegill/ Pumpkinseed	Rock bass
Stock	≥8 in	≥7 in	≥10 in	≥5 in	≥3 in	≥4 in
Quality	≥12 in	≥11 in	≥15 in	≥8 in	≥6 in	≥7 in
Preferred	≥15 in	≥15 in	≥20 in	≥10 in	≥8 in	≥9 in

Table 2. Number collected and catch rates of fish from gill netting on Canandaigua Lake, 2017

Species	Number collected	Catch rate (fish/net)
Alewife	57	3.4
Rainbow trout	1	0.1
Brown trout	4	0.2
Lake Trout	1	0.1
Chain pickerel	10	0.6
Common carp	6	0.4
Golden shiner	31	1.8
Spottail shiner	2	0.1
White sucker	24	1.4
Brown bullhead	6	0.4
Rock bass	60	3.5
Pumpkinseed	17	1.0
Bluegill	9	0.5
Smallmouth bass	21	1.2
Largemouth bass	14	0.8
Black crappie	6	0.4
Yellow perch	467	27.5

Brooking, T., Loukmas, J., Jackson, R., VanDeValk, T. 2018. Black bass and sunfish sampling manual for lakes and ponds. New York State Department of Environmental Conservation, Federal Aid in Sportfish Restoration, F-63-R, Study 2, Job 2-2.3, Albany, New York.

Green, D.M. 1989. Fish Sampling Manual. Centrarchid Sampling Manual. Bureau of Fisheries. New York State Department of Environmental Conservation, Albany, New York.